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DIV OF OIL GAS & MINING

LIME PEAK ROCK QUARRY
RECLAMATION PLAN

Prepared for

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1.0 INTRODUCTION

The Lime Peak Rock Quarry consists of an extraction and processing operation of an area that will be 5 acres or less. The quarry operation is located on Chief Consolidated Mining Company lands. Located within Section 4, Township 10 South, Range 2 West (See Figure 1), the quarry operation will remove limestone for use as riprap on remedial improvements associated with the Eureka Mills Remediation Project. The specific quarry information is contained in the Anderson Engineering Co., Inc. Notice of Intent to Commence Mining Operations (see attached).

The purpose of this plan is to address reclamation requirements contained under the Notice of Intention to Commence Small Mining Operations (Rule R647-3-107, 108 and 109).

2.0 PROPOSED IMPACTS

The area of disturbance is 5 acres or less for the purpose of a limestone quarry operation. The impacts related to this project include removal of surface soils and under lying limestone beds. The removal will be accomplished by use of explosives, excavators and trucks. Processing, consisting of crushing, screening and stockpile facilities will be approximately 1 mile away from the quarry extraction area.

The area of limestone material removal will be within the boundary shown on the attached drawing C-1. The quarry will be developed with a series of high walls and benches. The top of the uppermost high wall will daylight at an elevation of 6560 feet. Cut slopes will have a slope of 0.5:1 and will be 40 feet high. Between the high walls will be benches measuring 20 to 30 feet across. The final slope from the top of the high wall to the lowest toe is 1:1. Cross sections of the proposed impacts are shown on Figures C-1 - C-8.

Sparse vegetation exists presently on the site. This vegetation will be graded and included into plant growth media stockpiles to be used for reclamation.

3.0 MINING OPERATION

Extraction of the limestone will be accomplished by cutting in a road at the 6560-foot level. After removal of overburden materials, a drill and shoot process will be used to remove the first level of material to the 6520-foot elevation. The second and third levels

will be completed in a similar manner. The high wall for each level will begin approximately 20 feet from the toe of the previous wall with the exception of the existing high wall where excavation will begin 40 feet from the toe. After blasting operations, rock will be loaded into large trucks and transported to the processing area for crushing and screening.

The following paragraphs address the operation and reclamation practices under Section IV, Items 1 through 14 and Section V of the DOGM Form MR-SMO.

3.1 Area of Disturbance (Section IV)

The mining area will be 5 acres or less. The quarry disturbance will include limestone removal areas and loading areas. Crushing facility locations and stockpile areas will be located approximately 1 mile away at the base of the mountain. The excavation will be sequenced to allow roads and support facilities to be located near the excavation face. The roads and support facilities will be mostly located over excavated surface.

3.2 Operation Condition (Section IV, Item 1)

Quarry operation will be completed in a clean, safe and environmentally sensitive manner. Excavation will be sequenced in an orderly fashion with removal of the limestone material proceeding as stated in Section 3.0 of this plan.

A site specific Job Safety Analysis (JSA) will be prepared for the operation in addition to the contractors standard Safety Program. This site specific JSA will address potential hazards, safety actions and corrective actions as needed. Employees will be briefed on the site specific JSA and Contractor Safety Plan.

The environmental conditions of the disturbed area will be addressed by management of storm water run-off and management of fuels, lubricant and other products brought on site. Such products associated with the equipment operation will be properly stored and waste containerized for legal offsite disposal. Dust will be controlled by water of surfactant application to work areas, roads and stockpiles.

3.3 Shaft and Tunnels (Section IV, Item 2)

The Lime Peak Rock Quarry project does not propose the use of shafts and tunnels for extraction of limestone materials.

3.4 Drill Holes (Section IV, Item 3)

Drilling for blasting will be completed as required for extraction of rock.

3.5 High Walls (Section IV, Item 4)

The extraction of the limestone will involve removal of the material as shown on Figures C-1 - C-8, plan and cross-sections. Limestone will be removed up to the top elevation of 6560 feet, where the cut slope daylights on the existing slope. The excavation will consist of a series of 40-foot high slopes (0.5:1) and 20 to 30-foot wide benches, with an overall slope from top to bottom of 1:1. The lowest cut bench will daylight at an elevation of approximately 6440 feet.

The high walls are currently not fenced and no fencing is proposed for this area. Warning signs of the work activity will be posted between public access roads and the work area boundary.

3.6 Toxic Material Management (Section IV, Item 5)

The quarry operation does not require use of toxic materials for excavation. The potential materials that will be brought onsite include fuels (diesel and gasoline), lubricants and cooling agents for the heavy equipment and trucks serving in the limestone excavation process. All fuels and lubricants will be properly stored on site as needed. Most fuels will be transported in by fuel truck and not remain in large quantities on the site. No hazardous wastes are to be generated on site by the mining operation. Used lubricants will be shipped offsite for legal disposal.

3.7 Surface Water Management (Section IV, Items 6, 7 & 8)

All site debris and trash associated with the operation will be contained in dumpsters or cage boxes. Debris and trash will not be allowed to blow or migrate into waterways or drainages.

The Lime Peak Rock Quarry development will be managed to control sediment release from the excavation site. The areas down gradient from active excavation will be silt fenced. This fence will be critically placed between the excavation activity and the down slope mine area boundary. On site roads will have bar ditches constructed with straw bale, critically placed across the ditches to slow water velocity and serve as sediment catchments. Drainage paths will also be straw baled in addition to silt fenced to aid in erosion control and sediment retention. Potential surface flows will be routed around work areas by open cut channels with erosion and sediment control features.

4.0 PRESENT SITE CONDITIONS

The quarry site has been topographically mapped. This mapping is on a scale of 1 inch = 30 feet with a 5-foot contour interval and is shown in Figure C-9. The boundary of the 5-acre small mine site and pre-excavation surface expression is also shown on this Figure. Photographic documentation has also been collected and several are shown in Appendix A.

As part of the pre-mining documentation a range analysis survey will be conducted. This survey is to document existing vegetation cover and species diversity. The line intercept method will be used to evaluate the site vegetation and cover. The mine area will also be mapped as to vegetation and ground cover locations and areas. This information will be available to the Utah Division of Oil, Gas and Mining.

5.0 RECLAMATION ACTIVITIES

This Reclamation Plan is submitted pursuant to SS 40-8-12; 40-2-12.5, Utah Code and R 850-20-2300 of the SITLA Rules.

5.1 Topsoil (Section IV, Items 10 & 11)

The surface soils of the quarry area presently support sparse vegetation. The majority of the limestone slopes are void of vegetation. The flatter areas are characterized by drought tolerant grasses, shrubs and juniper type trees. These soils may not qualify as true topsoils but likely contain more plant nutrients than subsoils. For this Reclamation Plan these soils will be termed as plant growth media.

Plant growth media will be harvested from the slope areas that contain vegetation and from the flat areas. The limited amount of surface soil that can be segregated will be removed from these areas and stockpiled along the south and east boundary of the site.

Following excavation, backfill and landshaping the plant growth media will be replaced on terraced areas. The soil will be placed over the pit floor as required by Utah County Reclamation requirements. Stockpiled soils will be blended with clean imported soils, amended and prepared as seed beds for revegetation.

5.2 Landshaping and Backfill (Section IV, Item 11)

The excavated limestone along the vertical cliff walls will be removed to the

slope geometry illustrated in Figure C-1 - C-8. The overall cut grade in new excavation areas will be maintained at a top to bottom slope no greater than 1:1.

The flatter areas will be smooth shaped and graded to drain in a pattern similar to the pre-excavation flow. Blended plant growth media will be placed on floor areas. The placement of this soil is defined in Section 5.1 of this plan.

5.3 Roads (Section IV, Item 9)

The road that accesses the 3-acre quarry site is a dirt two lane road approximately 25 feet wide. The county road will be maintained during operation for use by haul trucks.

Onsite roads that access excavation areas will be part of the overall mine disturbance area. Roads will be moved as needed to service excavation activities.

5.4 Seedbed Preparation (Section IV, Item 12)

Following the replacement of plant growth media on flat areas the soil surface will be prepared as a seed bed. The flat areas will be prepared for seeding by scarification and soil amendments. Soil amendments will be applied as recommended by the soil test. The fertilizer will be broadcast over the surface soil prior to seeding . Fertilizer will be incorporated into the soil by soil scarification. Scarification will be accomplished by use of shallow rippers or a spike tooth type harrow to a depth of approximately 6 inches or as deep as possible. The intention is to create increased surface roughness to promote water catchments and thus improve seed germination. Scarification will be along the contour to aid in runoff erosion control and improve water retention on sloping soil surfaces. Rock slope areas are not scheduled for plant growth media.

5.5 Revegetation (Section IV, Items 13 & 14)

The flat areas will be seeded and mulched. The seed mixture for revegetation is shown in Table 5-1. Seed will be drill sown by a rangeland type seed drill over the prepared seed bed or hand spread as required. A total of 10.8 lbs/acre of pure live seed will be sown. Seed drills will be calibrated prior to seeding. Hay or straw mulch will be spread over the seeded areas. Mulching will be a separate operation and not applied with the seed. Hay or straw will be spread at 2 tons per acre. The hay or straw will be crimped onto the soil by use of a flat notched disk crimper. The crimping will be completed with two passes, one 90° to the other in order to keep mulch in place during windy periods.

Table 5-1

Common Name	Species Name	Rate lbs/ac (PLS)
Crested Wheatgrass	*Agropyron cristatum*	0.5
Thickspike Wheatgrass	*Agropyron dasystachyum*	1.5
Bluebunch Wheatgrass	*Agropyron spicatum*	1.5
Intermediate Wheatgrass	*Agropyron intermedium*	1.0
Lewis Flax	*Linum lewisii*	1.0
Basin Wildrye	*Elymus cinereus*	2.0
Ladao Alfalfa	*Medicago sativa*	0.5
Yellow Sweetclover	*Melilotus officinalis*	0.5
Palmer Penstemon	*Penstemon palmeri*	0.5
Small Burnet	*Sanguisorba minor*	1.0
Mountain Big Sagebrush	*Artemisia tridentata vaseyana*	0.1
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	0.2
Forage Kochia	*Kochia prostrata*	0.5
	Total	10.8 lbs/acre

5.6 Revegetation Success

The revegetation effort at the quarry site will be evaluated after one successful growing season for successful establishment. Vegetation growth will be measured using standard range analysis methods to evaluate cover on the flat areas of the site. Success will be determined by a comparison to analogous offsite areas.

5.7 Permit Fee, Mixed Land Reclamation Act 40-9-7(1) (Section VI)

The Utah Mined Land Reclamation Act of 1975 [40-8-7(1)] provides the authority for the assessment of permitting fees. Commencing with the 1998 fiscal year (July 1 - June 30), permit fees are assessed to new and existing notices of intention and annually thereafter, until the project disturbances are successfully reclaimed by the operator and released by the Division. The required $100.00 fee has been paid.

5.8 Signature Requirement (Section VII)

I hereby commit to conduct mining operations and to reclaim the aforementioned small mine as required by the Utah Mined Land Reclamation Act (40-8) and the rules as specified by the Board of Oil, Gas and Mining.

Signature of Operator/Applicant: _____
Name (typed or printed): _____
Title/Position: _____
Date: _____

6.0 RECLAMATION SEQUENCE

Reclamation will be completed after all planned rock production is complete.

7.0 RECLAMATION CONTRACT

The State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining Reclamation Contract is required for large mine sites (greater than 5 acres) and is not required for the Lime Peak small operation. Should this operation be expanded the Reclamation Contract will be completed and submitted as required.

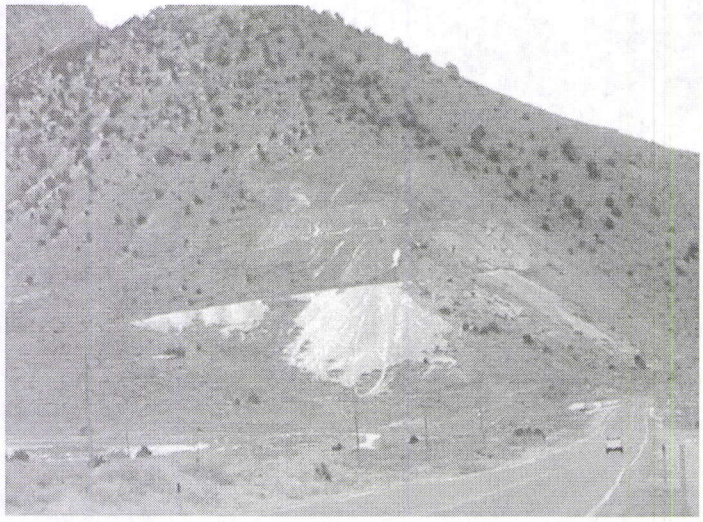
8.0 RECLAMATION BOND

The State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining, requires bonding for small mines less than 5 acres. A certified check for $17,000 or suitable surety is included as required by the Reclamation Act for a Reclamation Bond.

APPENDIX A

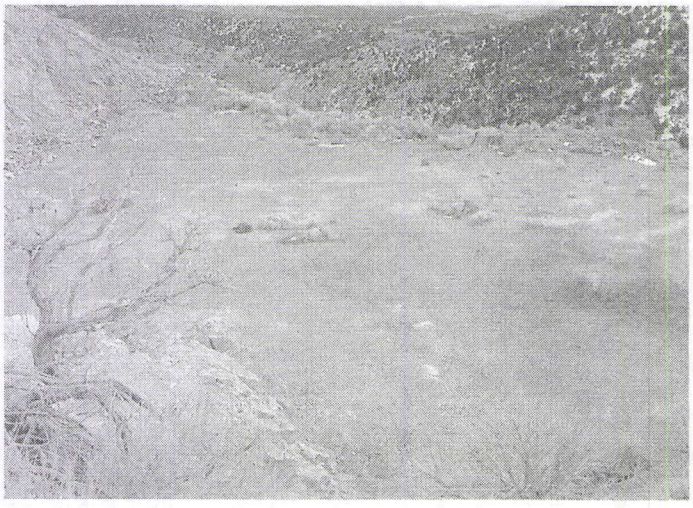
SITE PHOTOGRAPHS

Figure 2
Lime Peak Quarry Photos



Lime Peak Quarry - View from Highway 6

Looking East from County Road



Quarry Floor

Existing Quarry Face

Upper Limestone Beds in Quarry Face